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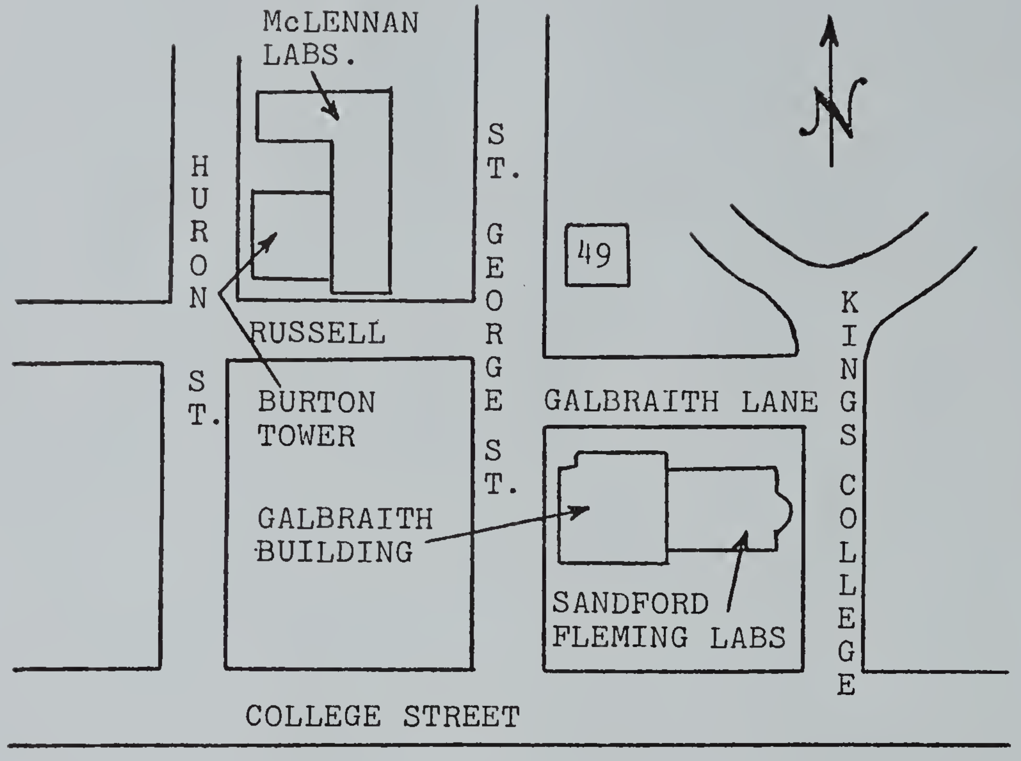
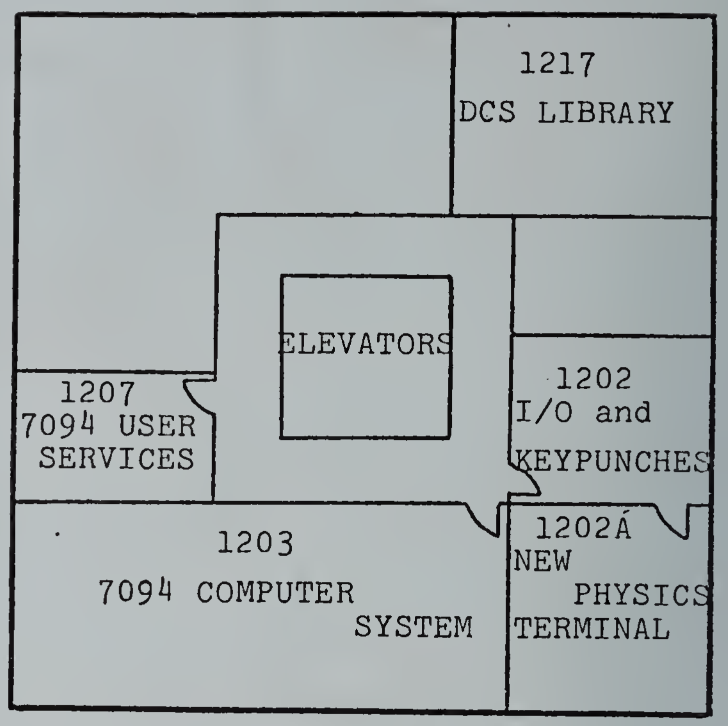
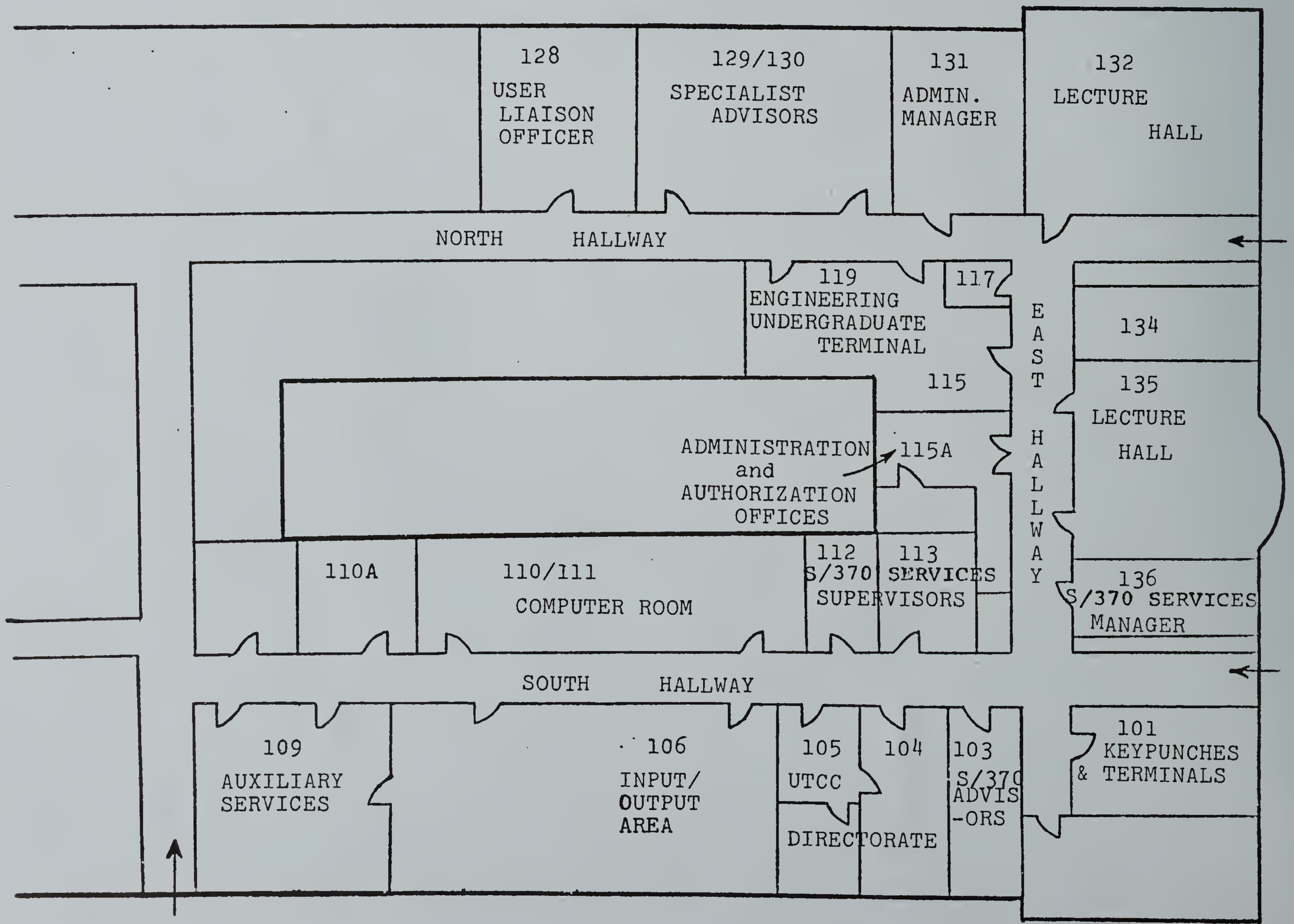




FLOOR PLAN: 12th FLOOR BURTON TOWER

FLOOR PLAN: UNIVERSITY OF TORONTO COMPUTER CENTRE
SANDFORD FLEMING LABORATORIES



COMPUTER CENTRE PRICES FOR 1972/73

C. A. Ford

The Pricing Sub-committee of the Presidential Advisory Committee on Computer Policy and Planning has carried out its annual review of Computer Centre costs and workloads. Its report to PACCPP has recommended the maintenance of the 1971/72 price list, "with a possible minor exception in the area of setup of tapes or disks".

System changes are being developed which will permit a more rational pricing of jobs requiring the use of removable tapes or disks. Another project will lead to an enhancement of the process of assigning online disk storage space to users and of accounting for such use. These procedures will become available during the next several months. The price lists will be adjusted appropriately when these changes become effective. Further announcements may be expected concerning these changes.

The maintenance of the prices for System/370 -165 Service amounts to a further interim endorsement of the prices established for CPU and core resource usage of the new machine. The user may recall that the Computer Centre and the Computer Users Committee set up a test of the proposed new System/370 prices. The Computer Centre made a report on the analysis of the test results to Professor R. A. Collins, Acting Chairman of the Computer Users Committee, on March 3rd 1972. Thirty-five job steps of meaningful size had been run on the System/360-65 in December and were replicated precisely on the System/370-165 in February of 1972. The February data showed overall CPU plus core charges of $362.54 for the System/370 compared with $627.46 for the System/360. The System/370 jobstream was therefore in aggregate 42.2% cheaper for the user than it would have been on the System/360. The CPU of the new machine was found to be 4.17 times faster than the CPU of System/360 for this set of job steps.

The Pricing Sub-committee of PACCPP plans a further review of UTCC experience toward the middle of the fiscal year 1972/73. This is thought appropriate because of the newness of the System/370 computer, which has yet to show its performance on a workload which is primarily research rather than student activity. The months May through August will provide experience with that type of workload.

SHARE, UTCC and YOU

C. A. Ford

SHARE, Inc. is a group of large scale IBM computer users. In SHARE terminology, the University of Toronto is a "member installation", so qualified by our several S/370 and S/360 machines. Your editor is the official representative to SHARE. Our membership permits staff members of UTCC, the computer research facility and any other interested member of the University to gain from or contribute to the SHAREing of knowledge of computer technology.

The thirty-ninth semi-annual SHARE conference meets in Toronto the week of August 7th to the 11th. It is a fine opportunity for you to become acquainted with the organization.

Typically, a SHARE installation is like this University with system programming technical personnel, with computer centre management staff and with computer users. An exchange of correspondence between Mrs. Arlene Larsen of the Rensselaer Polytechnical Institute and Dick Steinberg of M.I.T. illustrates a concern of SHARE, the tendency for "Joe User" to receive too little direct attention. The result of the exchange has been the scheduling of an organization session for a new project, User Services, within SHARE's Management Division. Many other sessions of interest to you are scheduled; the agenda may be previewed in Room 105, Sandford Fleming. Be part of "TY" at SHARE XXXIX.

Rensselaer Polytechnic Institute

TROY, NEW YORK 12181

Computer Laboratory

May 3, 1972

Mr. J. Richard Steinberg
Information Processing Center
39-427
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

Dear Dick:

For years SHARE has concentrated on the needs of the systems programmer and recently on the management of a computer center. If it were not for Joe User, all of this work would be in vain; however, we seem to ignore him and what he requires to perform his job properly. After the session on User Services chaired by Betty Campbell at the New York meeting, August 1971, I thought there would be follow up sessions on the various aspects of User Services.

In the last few years installations have realized the need and formally recognized such groups. Those of us in User Services know we have much to do. There is more to be done for the user than just offering him a host of languages and the facilities of the computer center; he must be taught how to use them, he must be kept up to date on changes and problems, he must be assisted in their use.

I believe SHARE has a responsibility to this end and would like to see such action initiated. If I can help in any way, I volunteer my services.

Sincerely yours,

Ms. Arlene S. Larsen
User Services

ASL/bvl

Massachusetts Institute of Technology
Information Processing Center
Cambridge, Massachusetts 02139

May 5, 1972

Ms. Arlene S. Larsen
User Services
Computer Laboratory
Rensselaer Polytechnic Institute
Troy, New York 12181

Dear Arlene:

I certainly am in sympathy with your objective to start a User Services project or committee in SHARE. I admit to being somewhat at a loss as to where in the organization it would fit, but the Management Division (sometimes known as the Catch All Division) is probably the appropriate place. I will discuss your suggestion with Shirley Frock and hear what she has to say on the matter. You will eventually hear from her or me.

Yours truly,

J. R. Steinberg
Assistant Director

JRS:sl
cc: Shirley Frock

SUGGESTION BOX: The Users Speak

P. LoBello

Suggestion: Credit Request Forms should be updated because they do not mention S/370-165 as a main processor and contain out-dated information regarding submission and pick-up of jobs.

Reply: The updated form is being printed and should be available soon.

Suggestion: One manual for each of the UTCC Interactive Systems should be available in Room 101.

Reply: The manuals will be placed on a rack in that room in the near future.

Suggestion: Users should be allowed to separately specify priorities for distinct job functions such as execute, print and punch.

Reply: The priority for printing and punching could differ from that for executing, but the printing and punching priorities are part of the same HASP phase ("step") and must be the same. There has not been a great demand for this approach since most people seem to feel more than one priority is too detailed. Also, the priority associated with executing represents the bulk of one's job cost. If user's opinions change the approach will be reviewed.

A PIONEER HAS GONE

C. A. Ford

Dr. Beatrice Worsley, one of the pioneers of automatic electronic computation, died suddenly while on sabbatical leave from Queen's University. Dr. Worsley's contributions to the field of computer science began here in Toronto in the early 1950's with Canada's first computer, the FERUT. She became one of three charter members of Queen's Computing Centre in 1965. Her presence and contributions will be missed by the world of information processing.

DATA ANALYSIS TRAINING AT CHICAGO

Press Release

The University of Chicago will sponsor two training programs in data analysis for behavioral and social scientists this summer, conducted by Darrell R. Bock, Professor of Education, Psychology. The two programs will be run during August 8-12 and August 22-26.

The first session, introducing statistical methods and computer programs for qualitative or discrete data, will be taught by Stephen Fienberg of the University of Minnesota, Donald Kolakowski of the University of Cincinnati, and Melvin Novick of the University of Iowa.

The second session, on principles and practice of multivariate data analysis, will be taught by Elliot Cramer of the University of North Carolina, Jeremy Finn and Samuel Peng of the State University of New York at Buffalo, and William Schmidt of Michigan State University.

Lectures will be given in the morning with the afternoon set aside for small group meetings. Programming instruction will be offered during the evenings when participants will have access to the University's IBM 360-65 and 1130 computers. For further information call or write:

DATS,
Judd Hall,
5835 South Kimbark Avenue,
Chicago, Ill. 60637.

Tel: (312) 753-3825.

PERSONNEL CHANGES

J. Schick

During the month of June there were several changes in staff at the Computer Centre.

New to the Interactive System staff are Joseph Markarian, Computer Operator, and Douglas Flower, Programmer.

Both Nancy Edmison and Cathy Pidcock terminated their employment with us after several years of working in various sections of the Computer Centre. Miss Edmison has left to further her education and Mrs. Pidcock to have a family.

System/370 Services' changes in staff include the addition of Robert Radcliffe and Leonard Prepas to our Users' Services Group. Mr. Radcliffe specializes in Graphics and Special Input/Output capabilities. Mr. Prepas is working in the Statistical Application area. Lynne Jenkins joined the staff this month as Telephone Operator/Receptionist in Room 130. S/370 is losing the capable typing services of Nancy Gilbert at month end.

Joan Brown, who has worked for eight years as a keypunch operator at the Centre, is leaving at the end of June to enjoy the summer at home with her family.

Carol Davidson has left the Centre to assist in ornithological research on the Galapagos Archipelago. Mrs. Davidson, who had been with us for a number of years, had been the supervisor of programming advisors and, more recently, had been appointed Assistant to the Liaison Officer.

SCIENTIFIC CONFERENCE - 12th EDITION OF BIAS - Press Release

A complete copy of a press release concerning an international conference on automation, to be held in Italy in November, may be seen in Room 105, Sandford Fleming. The release announces that the 12th edition of BIAS-International Biennal of Automation and Instrumentation - will take place in Milan from 22nd to 28th November 1972, inside the pavillons 12, 13, 14 and 14c of the International Fair of Milan, on a global area of 80,000 square meters. The automated factory will be the theme of the conference.

The International Conference, during the BIAS, will be dedicated to: "The Automated Integrated Factory in Corporate Development. Theoretical, Technological and Informational Aspects".

"The International Biennal of Automation and Instrumentation (BIAS), which began in 1956, has already made a name for itself as the most authoritative Italian exhibition in the sector and one of the most important in Europe. The Exhibition's 11th edition, held in Milan from the 20th to the 26th of November 1970, included the participation of 759 exhibitors from 17 countries. Visitors totalled 55,000, of which 9,000 were from abroad."

"For further information on the manifestation, which is organized by FAST, Studio Dr. A. Barbieri and by the Milan Section of ANIPLA (Italian National Association for Automation), please apply directly to: FAST - Piazzale Morandi 2 - 20121 MILANO - Tel. 78.30.51/2/3/4."

IBM AWARDS

C. A. Ford

Dr. McNaughton, the System/370-165 Manager, has been advised that two IBM Customer Engineers who help maintain the new machine received formal recognition for their efforts during Project '72, the installation project for the S/370.

Bob Saunders received an "IBM-SERVICE" award for his "individual effort in planning, organizing and preparing for these activities which was a major contributing factor to their successful completion. Partly due to Bob's excellent preparation, the 370-165 was installed without any major problems".

Barry Wilson received a Special Contribution citation reading in part, "The recent installation of a 370-165 required major equipment relocation. During these activities the uninterrupted availability of teleprocessing networks was vital to the University's operation. In spite of the complexity and number of equipment relocations, the conversion was completed without a single interruption".

We appreciated the efforts of Bob, Barry and many others during Project '72 and are pleased that their own company did also.

GRAFFITI POWER

C. A. Ford

Opposite the word YESTERDAY on a UTCC bulletin board an unknown graffiti artist added a few words paraphrasing those of a familiar song. The idea suggested a full chorus printed below. May the Beatles and IBM forgive our levity.

Yesterday All My Program Bugs Seemed Far Away
Now It Looks As If They're Here To Stay,
Oh I Believe in Yesterday

Suddenly I'm Not Half The Whiz I Used To Be
There's An Abend Hanging Over Me
Oh Overtime Comes Endlessly

O S Doesn't Help Me Keep My Sanity
J C L Will Drive Me Into Lunacy

Yesterday Coding Was An Easy Exercise
PL/One Leaves Places Bugs Can Hide
Oh Who Needs OS On His Side?

DEPARTMENT OF COMPUTER SCIENCE NEWS

C. Phillips

DCS SQUASH TOURNEY

From a field of sixteen contenders, Eric Drumm met Rick Bunt in the final match of the Squash Tourney. In the six previous rounds, the two finalists had each won 5 games and lost 1. Congratulations to Eric Drumm the winner of the championship match.

COMING AND GOING

Professor Pat Hume will be on sabbatical during the next academic year. Professor Laurie Johnston will visit the University of Manchester, England and the University of Dundee, Scotland during his sabbatical leave next year. Professor Bill McKeeman returns to sunny California after a year as a Visiting Professor here. His insight and wit will be missed. Professor Denis Tsichritzis is spending the summer months visiting the IBM Watson Research Center in Yorktown Heights.

CONGRATULATIONS

Professor Denis Tsichritzis was recently elected President of the Computer Science Association of Canada.

VISITORS

During the week of June 19th, three visitors from the Institute of Computer Technology, Academy of Science, Peking, were at the University of Toronto. Mr. Chang Hsui, Mr. Huang Te-Chin and Mr. Hsu Kung-Shoh visited with faculty and students in C.S.R.G., Computer Centre, the Department of Computer Science and Electrical Engineering. They visited Air Canada to observe their reservation system. IBM gave the delegation a tour during one afternoon.

CRJE TERMINAL SUPPORT

J. Boddy

At the present time the Conversational Remote Job Entry on the S/370-165 is capable of supporting the following terminals:

1) IBM 2741 COMMUNICATION TERMINAL with EBCD print element IBM #963.

2) IBM 2741 COMMUNICATION TERMINAL with correspondence print element IBM #527 containing the symbols ><|¬! together with the following compatible terminals:

    a) IBM Communicating Magnetic Card Selectric typewriter
    b) ITEL 1051
    c) DATEL 30

N.B. Users accessing CRJE with terminals of the types listed above should dial the IBM 2741 telephone numbers (928-7233, 7381, 7386). Users accessing CRJE with the terminals listed below should call the Teletype telephone number (928-7445).

3) TELETYPE 33/35 with or without paper tape facilities supporting 72 characters per line, and the following compatible terminals:

    a) EXECUPORT 300
    b) DATAPOINT 3300 DISPLAY

4) GE TERMINET 300 with support for 118 characters per line.

5) MEMOREX 1240 with support for 120 characters per line.

The GE TERMINET 300 terminal must be identified at LOGON time by the addition of the terminal type option T(GE110) to the LOGON sequence. Similarly the MEMOREX 1240 must be identified at LOGON time by the terminal type option T(MEM110).

e.g. `LOGON CRXXX/password T(MEM110)`

Software and hardware support is available for terminals listed in items 3, 4 and 5 above for the following features:

i) Support for the EBCDIC characters |¬_¢ via the ↑]\[keys.

ii) Effective backspace capability via the ← key.
iii) Interrupt capability via the BREAK key
iv) Effective TAB support on input via the control/I key combination and the software TABSET command.

Any user who is successfully accessing CRJE with any model of terminal other than the models listed above is asked to contact J. Boddy at 928-6317 or S. Yagi at 928-7331. Users who have access to terminals not included in the above list and who would like CRJE support available through these terminals are asked to contact 928-6317 or 928-7331.

USER FORUM #1

J. Campbell

The first of a series of S/370 User Forums held on June 8 was attended by a good cross-section of interested users. Introductory remarks made by Dr. D.J. McNaughton, System /370 Services Manager, gave a brief outline of the management structure of the Computer Centre and described the product line divisions of responsibility.

Roy Finlayson, I/O Services Supervisor, described new developments in his area, such items as the new Self-Service I/O and the projected introduction of 3330 disk units and new 1600 BPI tape drives. Roy also touched on the plans to phase-out Auxiliary Services in favor of instream processes through the General Purpose Job Stream. Also mentioned were the implementation of SPITBOL in the High Speed Job Stream and upgrading of the Remote Terminals.

Rein Mikkor, Assurance Supervisor, identified the Assurance functions as falling into three categories: assurance, information processing and direct processing. The assurance function includes such items as installing new software, removing bugs from the existing software, and assuring that the system can fall back gracefully through the implementation of new features. The information processing function observes the system while it is running through monitoring tools such as Hardmon II, a hardware monitor, and various software monitors. The direct processing function provides the actual control of the system while it is running jobs.

Rein outlined plans to provide display units at the remote terminals to provide the same backlog information now available in the local I/O. He also mentioned plans to provide for on-demand job inquiries and the ability to predict when a job will be printed.

Al Wickens, Development Manager, clarified the Development functions. He described on-going and future projects in the Development area. These included bringing up OS Release 21, modifications to HASP to allow for improved resource scheduling, modifications to HASP and to the HSJS module so that processor errors will affect only an individual job, and the removal of bugs from CRJE. Long-range plans include interconnecting the S/360 and S/370 system via HASP.

Stan Yagi, User Services Supervisor, identified the three general categories of User Services: advising, information services and application software. The advising function provides qualified programmers to assist HSJS and GPJS users with their programming problems. The information services function includes such items as user and staff education and the preparation of S/370 publications. The application software function provides for the addition and support of special application software. A question and answer period followed.

User Forums are expected to be held on a regularly scheduled basis, with the intention of providing users with a chance to comment on and criticize changes while they are still in the planning stage. Suggestions regarding topics and improvements to future User Forums are welcomed and should be directed to Mr. R. Cox, Sandford Fleming Room 130, 928-7318.

OS RELEASE 21

D. Brady

This new release of the Operating System is being implemented this month on the S/370 model 165 at the Centre. This article provides only a summary of features of the new release; more details will be available from S/370 User Services. A Release 21 seminar is also planned.

The new release is needed to support new hardware and it will correct many reported errors in Release 20. Some module repackaging will help to improve performance.

An intensive testing program on the Centre's S/370 has preceded production release of the new OS system. Fixes have been obtained for errors discovered here and elsewhere after IBM's release of the package.

The vast majority of user jobs will run unaltered on the new release. There are a few minor changes to some language processors, but none to FORTRAN or PL/1. In any case, the Release 20 processors will be called as default options. There is upward, but not complete downward, compatibility between the Release 20 and 21 linkage editors and loaders. IBM does not provide Release 21 versions of either COBOL (F) or TESTRAN.

Operational improvements are another worthwhile aspect of the latest release. New graphics console features allow the operator to view dynamically-updated displays of system status. There is improved software recovery from hardware errors. A feature called Reliability Data Extraction will be used to generate reports of system failures. Finally, new utility programs will improve our ability to maintain system data sets and trace system activity.

New error message printouts of 21 will give more details on the common and previously ambiguous "abend codes" such as B37 and 013. This feature is sure of happy acceptance.

Operating System Release 21 will, we believe, enhance the usefulness and reliability of the System/370-165 for all its users.

S/370 APPLICATIONS SOFTWARE SUPPORT

J. Hockin

A software library of Statistical Methods and Social Science Applications is now available to users of S/370 general purpose job stream. This library encompasses data sets for load modules, source modules, test problems and complete user documentation. The contents of the library are currently classified under the following headings:

A. Package Descriptions
B. Data Screening
C. Elementary Probability and Statistics and Tabulation
D. Regression Analysis and Correlation
E. Analysis of Variance
F. Discriminant Analysis
G. Factor Analysis
H. Time-series Analysis
I. Non-Parametric Statistics
J. Canonical Correlation
K. Other Special Programs

In addition to independent routines, the library currently includes parts or all of the following software packages:

Statistical Package for the Social Sciences
Biomedical Computer Programs
Scientific Subroutine Package (FORTRAN)
The Data-text System

A listing of the table of contents and instructions for obtaining complete user documentation for any item in the library can be obtained by running the following CLASS=B job:

```
// EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSUT1   DD DSN=IC.STATLIBD(CONTENTS),DISP=SHR
//SYSUT2   DD SYSOUT=A,DCB=BLKSIZE=80
//SYSIN    DD DUMMY
```

S/370 CREDIT REQUESTS

C. A. Ford

Reports from S/370 management shows that credit request activity has been rising somewhat from a low point in February (only 7 reported claims). The months March, April, and May produced 31, 39, and 55 respectively. This may be compared to the same period of 1971, which gave 55, 34, and 37 for nearly identical quarterly totals.

This same three month period in 1972 showed 114,460 general purpose jobs serviced compared to the figure of 61,093 for 1971. The incidence of credit request action was therefore reduced from 0.21% of jobs in 1971 to only 0.11% in 1972.

The rise in claims in May was caused largely by Calcomp problems which are now believed to be solved.

PRODUCTION STATISTICS FOR HSJS

J. Lees

The accompanying histogram shows the total number of jobs processed through the High Speed Job Stream during the month of May.

Recall that the types of jobs are:

WATFIV (W), ALGOL W(G), PL/C (C),
ASMG (A), SIMON (S), and LIST (L).

72.3% of these jobs were run through the EUT terminal, an increase of 8.8%. 22.4% of the jobs were run through ASUT, a decrease of 8.8%. The 5.3% run through the remotes remain constant compared to last month.

(ED: The histogram, scaled to represent the number of jobs in each quarter-hour time slice from 8 A.M. to 10 P.M., has shown a very persistent trend since it was first generated late in 1971. There is a nearly-constant traffic, at about half of the peak throughput rate, from 5 P.M. to 10 P.M. In May these five hours accounted for a full 30% of the whole load. So come in the evening and meet your friends!)

```
ALL    JCB SUMMARY  *************  FOR 01-310572
    #      G      C      P      A      S      L    TOT TIME
   29      5      4      0      0      0      9     47  8+
   81      2      2      0      0      0      2     87   |WW
  130      3      6      0      4      0     12    155   |WWW
  192     13     14      0      5      0      2    226   |WWWW
  249     12     21      0      5      0      8    295  9+WWWWWW
  350      5     15      0      9      0     25    404   |WWWWWWWW
  492      6     36     13     22      2     68    639   |WWWWWWWWWWWWL
  670      4     36      7     22      0     15    754   |WWWWWWWWWWWWWWWW
  772      3     26     15     20      3     28    867 10+WWWWWWWWWWWWWWWWWWW
  844      3     19      7     20      2     22    917   |WWWWWWWWWWWWWWWWWWWWW
  917      8     31      1     17      1     16    991   |WWWWWWWWWWWWWWWWWWWWWW
  943      3     31      4     15      1     26   1023   |WWWWWWWWWWWWWWWWWWWWWWW
 1034      4     46      6     20      0     26   1136 11+WWWWWWWWWWWWWWWWWWWWWWWWWC
 1098      4     45      2     21      0     26   1196   |WWWWWWWWWWWWWWWWWWWWWWWWWWWC
  989      6     38      2     32      1     30   1098   |WWWWWWWWWWWWWWWWWWWWWWWW
 1161      8     54     25     23      0     44   1315   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWCL
 1094      6     58      1     25     21     60   1265 12+WWWWWWWWWWWWWWWWWWWWWWWWWWWCL
 1031     10     49     14     35      0     30   1169   |WWWWWWWWWWWWWWWWWWWWWWWWWC
  910      6     46     14     19      4     25   1024   |WWWWWWWWWWWWWWWWWWWWWWC
  952      8     50      5     20     15     13   1063   |WWWWWWWWWWWWWWWWWWWWWWWC
  906      3     45      5     23      0     48   1030 13+WWWWWWWWWWWWWWWWWWWWWWCL
 1089     14     47      7     30      0     25   1212   |WWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1137      9     55      1     33      0     22   1257   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1072     17     46     27     38      1     75   1276   |WWWWWWWWWWWWWWWWWWWWWWWWWWCL
 1102     12     29      8     30      1     37   1219 14+WWWWWWWWWWWWWWWWWWWWWWWWWWW
 1219      6     27     24     34      0     36   1346   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWW
 1286      8     41     22     36      0     28   1421   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1300     18     33     20     27      0     72   1470   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWL
 1342     14     46      4     22      2     36   1466 15+WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1458     19     62     10     26      0     67   1642   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWCL
 1564     25     73      7     23      0     31   1723   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1442      9     77     14     40      0     96   1678   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWCALL
 1391     15     35     26     30      0     26   1523 16+WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW
 1489     16     52     21     28      0     23   1629   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1516     22     47      4     36      0     36   1661   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1409     11     53      5     33      0     36   1547   |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWC
 1037      3     26      3     20      0     14   1103 17+WWWWWWWWWWWWWWWWWWWWWWWWW
 1075      5     30      0     17      0     22   1149   |WWWWWWWWWWWWWWWWWWWWWWWWWW
  988     12     20      1     16      0      4   1041   |WWWWWWWWWWWWWWWWWWWWWWWW
  926     10     43      0     13      0     11   1003   |WWWWWWWWWWWWWWWWWWWWWWWC
  806      5     24      1     12      0     19    867 18+WWWWWWWWWWWWWWWWWWWW
  815      5      8      2     16      0     13    859   |WWWWWWWWWWWWWWWWWWWW
  795      4      7      2     19      1      5    833   |WWWWWWWWWWWWWWWWWWW
  727      4     11      0     20      1      6    769   |WWWWWWWWWWWWWWWWWW
  698      8     13      2     13      3      1    738 19+WWWWWWWWWWWWWWWWW
  733      7     13      0     13      1      8    775   |WWWWWWWWWWWWWWWWWW
  794      8     16      1     17      2      6    844   |WWWWWWWWWWWWWWWWWWW
  837     10     24      2     13      1      4    891   |WWWWWWWWWWWWWWWWWWWW
  861     10     11      2     18      1     23    926 20+WWWWWWWWWWWWWWWWWWWWW
  936      8     21      2     18      0      2    987   |WWWWWWWWWWWWWWWWWWWWWWW
  948      9     14      5     15      0      4    995   |WWWWWWWWWWWWWWWWWWWWWWW
  851      5     18      1     21      4      8    908   |WWWWWWWWWWWWWWWWWWWWW
  862     10     15      5     15      2     17    926 21+WWWWWWWWWWWWWWWWWWWWW
  867     10     18      4     17      2      5    923   |WWWWWWWWWWWWWWWWWWWWW
  825      9     15      5     11      2     12    879   |WWWWWWWWWWWWWWWWWWWW
  762      9     18      6     13      6      8    822   |WWWWWWWWWWWWWWWWWWW
----- ------ ------ ------ ------ ------ ------ ------ 22+---------+---------+---------+---------+---------+----
51831    495   1761    365   1142     80   1373  57033   0        400       800      1200      1600      2000
```

SYSTEM STATUS BULLETINS ISSUED

J. Campbell

28:72:1	New PL/1 Graphics for CRJE Teletype Users
28:72:2	S/370 Application Software Support
29:72:1	CRJE Terminal Support
30:72:1	FORTRAN IV (H Extended) Compiler and Subroutines Library
31:72:1	Changes to SYS3.PROCLIB*
32:72:1	S/370 Applications Software Support

SYSTEM RELIABILITY

S. Goldfarb

The following table summarizes the time lost due to system failures out of scheduled hours of production for the period May 1 through May 31, 1972. The total number of scheduled hours of operation during this period was 517 (including Victoria Day). In addition to the loss indicated below, four late starts (IPLs) resulted in losses of 7, 11 and 15 minutes for APL, ATS and CPS, respectively. The total losses represent 0.5% of the scheduled time for each of APL, ATS and CPS. The uptime for each of APL, ATS and CPS was 99.5%. (In addition to the scheduled hours of operation, APL, ATS and CPS were each available during approximately 99 hours of unscheduled weekend time.)

DATE	DOWN TIME (mins.)			REASON
	APL	ATS	CPS	
Monday, May 1	144	145	146	*CPU failure (hardware)
TOTAL	144	145	146	*indicates IPL required

SYSTEM FAILURES FOR MAY 1 to MAY 31, 1972

HAPPY BIRTHDAY DEAR QVQ!

J. Walton

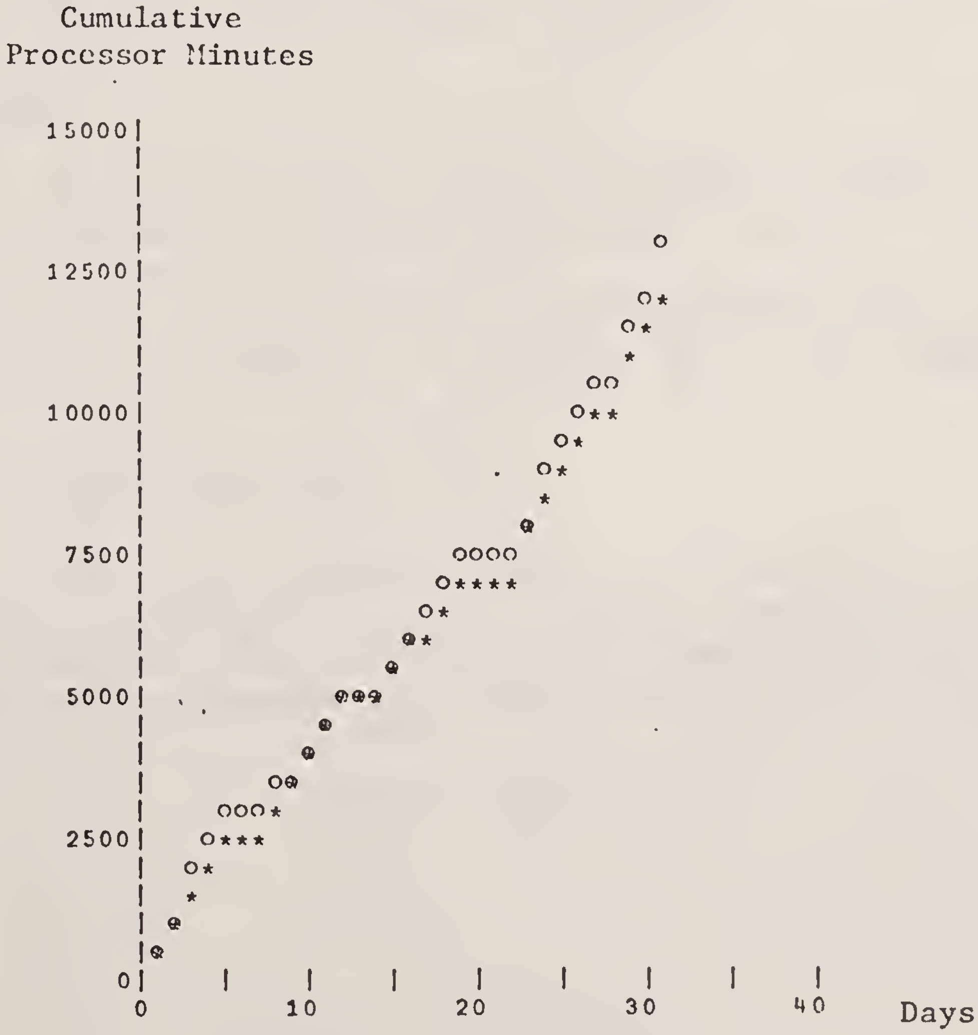
Ten years ago, on the 16th of July, 1962, the IBM 7090 computer was delivered to the University of Toronto. Since then, the equipment has been upgraded to become a 7094, and then a 7094 II, but the original equipment has stayed with us through several relocations and generations of software and satellite support.

In honour of this anniversary, we are inviting all users and fans of the 7094 II to join us in a celebration party on July 15th. Please reserve the date on your calendar now; particulars of time, place, etc., will follow on the UTCC Bulletin Boards.

(QVQ? Hint: how do you say "94" en francais?)

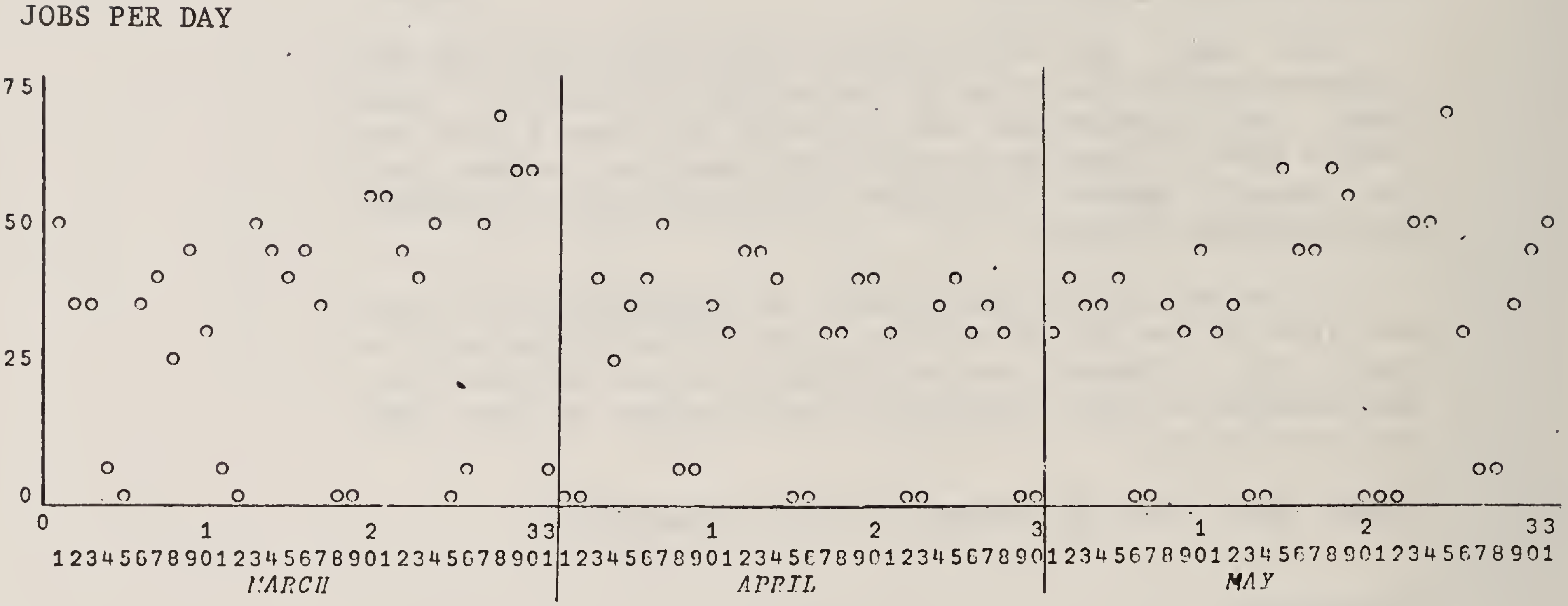
PRODUCTION

The Consortium arrangement continues to keep the 7094 busy. Figure I below shows the relative amounts of 7094 CPU time used by the Consortium and by others. Figures II and III show job and CPU time volumes for the March, April and May quarter.

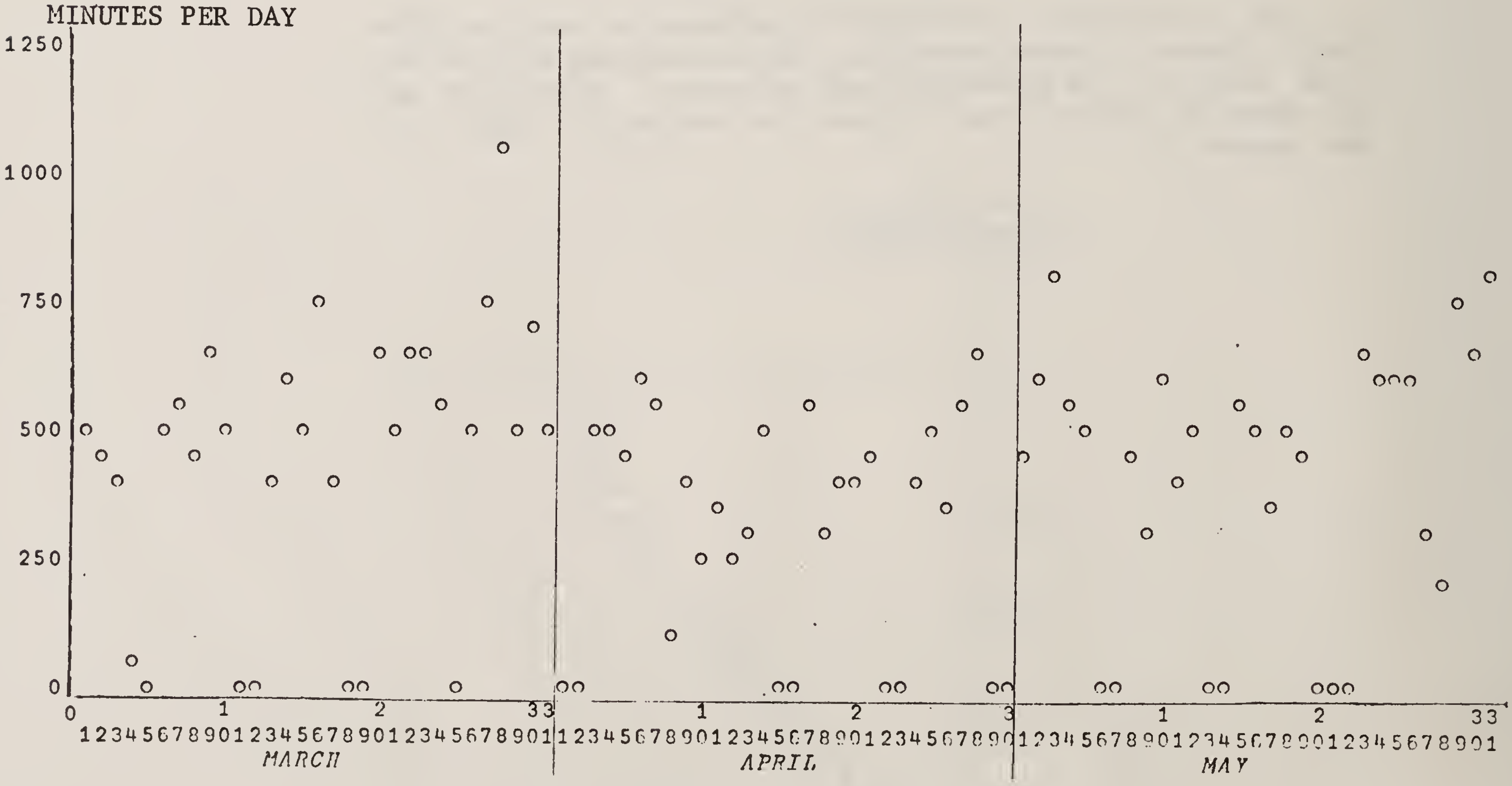


CUMULATIVE DAILY 7094 PROCESSOR MINUTES
MAY 1972

o *ALL USERS* * *CONSORTIUM*



7094 JOBS PER DAY



7094 MINUTES PER DAY

GENERAL NEWS

J. McBride

New Equipment

Disk Drives: On Monday, June 19th, 1972 a 9-drive IBM 2314 disk storage system was installed in the CRF lab. This replaced the 5-drive 2314 which was already on the 360-44 system.The additional drives will speed up the mounting of special packs which proved to be one of the major problems on the 5-drive system.

Digitizing Tablet: CRF has acquired a DEC VW01 Writing Tablet (digitizer) which has been attached to the PDP-8/1 system. The tablet has a drawing surface of 11" x 11" and a digital resolution of 1024 x 1024 points. The tablet can work in two modes:

a) Single Point Mode; where the x and y coordinates of individual points are digitized; or

b) Data Input Mode; where x and y coordinates are continuously digitized.

CIPS Conference

A total of nine CRF users presented papers at the CIPS Conference in Montreal, June 1st through 3rd, 1972.

The University of Toronto was well represented at the conference with a total of 6 papers and over twenty attendees.

Visitors to the CRF Laboratory

The following people visited the lab. between May 15th and June 12th: Professor N. D. Little (University of Waterloo), Students from Sir Sandford Fleming School, Mr. Ron Ball (MAI Canada Ltd.), Mr. Lloyd Taylor (Greyhound Computer Canada Ltd.), Mr. J. Valikna (Bell Northern, Ottawa), Professor J. R. Abrial (University of Grenoble, France), Professor L. Bolliet (University of Grenoble, France), Professor Rup. L. Graf (Technische Hoch Schule, Munich, W. Germany), Professor R. Collens (University of Manitoba), Professor W. R. Bezanson (Carleton University), Professor O. Ramos (University of Havana), Mr. L. B. Moore (Ryerson P.I.) Mr. W. Woolfrey (D.E.McMullen & Associates), Professor I. A. Morgulis (Ryerson P.I.), Professor D. G. Williams (Ryerson P.I.), Mr. P. A. Russel (The New Stonehenge).

CRF Publications

New: "Description of Equipment", form #CRF409, May 1972

Revised: "CRF Booking Procedures", form #CRF616-1, May 1972

"CRF Emergency Procedures", form #CRF 607-2, May 1972.

UTCC DIRECTORY

	ROOM	PHONE 928-
DIRECTOR		
John C. Wilson	SF105	6496
ASSISTANT DIRECTOR		
C. Alan Ford	SF105	2991
USER LIAISON OFFICER		
Bill Greene	SF128	2694
ADMINISTRATION MANAGER		
Jerry Palter	SF131	8948
AUTHORIZATION CLERKS		
Nancy Pocock (S/370 + 7094)	SF115A	8702
Susan Sim (Interactive)	49 St. Geo.	8703
S/370 SERVICES		
MANAGER		
Dave McNaughton	SF136	6281
INPUT/OUTPUT SUPERVISOR		
Roy Finlayson	SF112	7092
USER SERVICES SUPERVISOR		
Stan Yagi	SF112	7331
PROGRAM ADVISORS	SF103	8599
INTERACTIVE TERMINAL SYSTEMS		
MANAGER		
Sam Goldfarb	49 St.Geo.	3787
7094 SERVICES		
MANAGER		
Joyce Walton	BT1207	7094
DEVELOPMENT MANAGER		
Alan Wickens	49 St.Geo.	6135

JOB STATUS QUERIES:	
SYSTEM/370	7373
7094	7094
Auxiliary Services	6465
INTERACTIVE TERMINAL SYSTEMS:	
System Status	6234
APL	7200
ATS	7100
CPS	6200
CONVERSATIONAL REMOTE JOB ENTRY (CRJE)	
2741	7233, 7381, 7386
TTY	7445

UTCC COMPUTER EQUIPMENT

(a) SYSTEM/370 MODEL 165

- located in SF 106/110/111
- provides General Purpose Job Stream and High Speed Job Stream services
- 2048K bytes of core
- 16 disk drives
- 1 drum
- 6 magnetic tape drives (4 9-track and 2 7-track)
- 6 display consoles
- 5 printers
- 4 card readers
- 2 card punches
- 6 remote terminals
- 1 paper tape reader

- OS/MVT with HASP and CRJE

(b) SYSTEM/360 MODEL 65

- located in Room 333 McLennan Physical Laboratories
- provides Interactive Systems Service
- 1536K bytes of core
- 8 disk drives
- 2 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 85 2741 typewriter terminals

- OS/MVT with APL, ATS, and CPS

(c) 7094 II

- located in Room 1203 Burton Tower
- 32K words of core
- 1 disk
- 8 magnetic tape drives
- input/output via a 1401 computer

UTCC AUXILIARY EQUIPMENT

- located in SF Room 109
- System/360 Model 20 for unit record services
- CALCOMP plotter (11" and 30")
- card sorter
- decollator
- 519 reproducing punch

UNIVERSITY OF TORONTO
COMPUTER CENTRE,
TORONTO, CANADA.